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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,972	01/22/2002	Tsuneo Konishi	Q68160	7887

7590

04/09/2003

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EXAMINER

FIGUEROA, FELIX O

ART UNIT PAPER NUMBER

2833

DATE MAILED: 04/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/050,972

Applicant(s)

KONISHI ET AL.

Examiner

Felix O. Figueroa

Art Unit

2833

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

Claims 1 and 11-17 are objected to because of the following informalities:

In claim 1 line 2, "the" should be deleted after "comprising".

In claims 11 and 15-17, "the group" should be --a group--.

In claim 12-17, "hardening" should be changed to --solidifying--.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5, 8, 11, 12 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Park et al. (US 6,332,821).

Park disclose a method for manufacturing a display panel, comprising steps of: laying a front substrate (11) and a rear substrate (112) on each other with a sealing frit (23) therebetween; heating the front substrate, the rear substrate and the sealing frit in a chamber and exhausting impurity gas from the substrates by lowering internal pressure of the chamber (col.5 lines 8-10); melting the sealing frit by further heating the front substrate, the rear substrate and the frit (col.5 lines 12-14); solidifying the sealing frit and sealing up the front and the rear substrates (col.5 lines 41-43).

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Regarding claim 2, Park discloses the melting and sealing being continuously carried out in the chamber.

Regarding claim 5, Park discloses a step of heating and depressurizing an inside of the chamber (col.6 lines 38-41) after the sealing step.

Regarding claim 8, Park discloses a step of filling a space between the substrates with a discharge gas (col.6 lines 63-65).

Regarding claim 11, Park discloses the exhausting step comprising a step of introducing dry air (col.5 lines 32-33).

Regarding claim 12, Park also discloses the melting and the solidifying comprising a step of lowering internal pressure.

Regarding claim 15, Park also discloses the melting step and the solidifying step comprising a step of introducing dry air.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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~~Claims 3, 4, 6, 7, 13, 14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being~~  
unpatentable over Park in view of Nishimura (US 6,309,272).

Park discloses an exhaust pipe (22) connected to the rear substrate with fixing frit (see Fig.2). Park discloses substantially the claimed invention except for the specific frit used. Nishimura shows that a crystalline glass frit is an art recognized equivalent

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structure for sealing a display panel. Therefore, because these two sealing frits were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute of Nishimura for Park to seal the substrates together.

Regarding claims 6 and 7, see previous discussion on claim 5.

Regarding claims 13 and 14, see discussion on claim 12.

Regarding claim 16 and 17, see discussion on claim 15.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park in view of Dynka et al. (US 5,697,825).

Park discloses substantially the claimed invention except for the level difference in the sealing frit. Dynka teaches a sealing frit (60,62) having a level difference defining gaps between the substrates, by applying a first continuous frit (60) to an edge of one the substrates and selectively applying a second frit (62) onto the first frit to provide a flow path during evacuation and sealing process (col.7 lines 21-24). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the sealing frit of Park having a level difference, as taught by Dynka, to provide a flow path during evacuation and sealing process.

### ***Conclusion***

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Watkins (US 6,036,567) disclose a method for manufacturing a display panel, comprising steps of: laying a front substrate (10) and a rear substrate (12) on each other with a sealing frit (18) therebetween; heating the front substrate, the rear substrate and the sealing frit in a chamber and exhausting impurity gas from the

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substrates by lowering internal pressure of the chamber (col.3 lines 3-5 and 19-21); melting the sealing frit by further heating the front substrate, the rear substrate and the frit (col.3 lines 3-5); solidifying the sealing frit and sealing up the front and the rear substrates. Watkins also discloses the melting and sealing being continuously carried out in the chamber. Slusarczyk et al. (US 5,964,630) discloses the use of frit to fix the exhaust pipe to the substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix O. Figueroa whose telephone number is (703) 308-0097. The examiner can normally be reached on Mon.-Fri., 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (703) 308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

ffr

April 3, 2003



RENEE LUEBKE  
PRIMARY EXAMINER